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RESEARCH DESIGN AND METHODS

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ON OF ABNORMAL DISCHARGE OUTSIDE THE ARC TUBE

interrupt its AC output power to the discharge lamp upon occurrence. It is included to examine a lamp voltage once in each of the positive and negative half cycles of the AC output power and to identify the abnormal discharge when there is a discharge abnormality. The abnormal discharge may be defined by a single logic or by combination of several logic conditions for the normal discharges of several types.

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(57) Abstract: A discharge lamp ballast is designed to limit or interrupt its AC output power to the discharge lamp upon occurrence of an abnormal discharge outside of an arc tube. A detector is included to examine a lamp voltage once in each of the positive and negative half-cycles or in each one complete cycle of the AC output power and to identify the abnormal discharge when there is a particular change in the monitored lamp voltage. The particular change may be defined by a single logic or by combination of several logics each designed to represent specific characteristic for the abnormal discharges of several types.